



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,957	09/15/2003	Scott P. Geisler	GP-303358	1041
7590	03/11/2005			EXAMINER LAI, ANNE VIET NGA
KATHRYN A. MARRA General Motors Corporation Legal Staff, Mail Code 482-C23-B21 P.O. Box 300 Detroit, MI 48265-3000			ART UNIT 2636	PAPER NUMBER
DATE MAILED: 03/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/662,957	GEISLER ET AL.
	Examiner	Art Unit
	Anne V. Lai	2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 September 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-8 and 11-30 is/are rejected.
- 7) Claim(s) 9 and 10 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 15 September 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-5, 8, 13, 16, 18-21, 24, 25-26, 28 and 30 are rejected under 35 U.S.C. 102(a) as being anticipated by **Fecher et al** [US. 6,580,984].

Regarding claim 1, **Fecher et al** disclose a method for estimating workload placed on the driver of a vehicle (fig. 2; col. 2, lines 59-67; claim 29; col. 1, lines 50-51), comprising:

receiving workload estimation data (col. 1, lines 57-63);
detecting driving conditions responsive to said workload estimation data;
calibrating an impact value (weighting) of at least one of said driving conditions ;
combining (summing) each said impact value to determine a current driving workload estimate; and

outputting said current driving workload estimate (supplying information).

Regarding claims 2-4, **Fecher et al** disclose the workload estimation data includes internally generated vehicle data, environment data and current task data (fig. 2; col. 1 line 57 through col. 2, line 37).

Regarding claim 5, **Fecher et al** disclose calibrating includes applying a weighting algorithm to at least one of the driving conditions (fig. 2; col. 2, lines 59-67).

Regarding claim 8, **Fecher et al** disclose combining includes summing (additive operation is inherent) (col. 2, lines 59-67).

Regarding claim 13, **Fecher et al** disclose the supplying information to the driver, therefore outputting information to a specific location is inherent, since the specific location is the location of a device that presents the information to the driver (abstract; col.3, lines 60 through col. 4, line 4).

Regarding claim 16, **Fecher et al** disclose the outputting is performed on a periodic basis (col. 1, lines 52-53).

Regarding claim 18, **Fecher et al** disclose the workload estimation data includes at least one of vehicle speed, turn signal status, etc. (col. 1, line 64 through col. 2, line 64 though col. 2, line 8; col. 3, lines 1-40).

Regarding claim 19, **Fecher et al** disclose the workload estimation data includes at least one of wiper status, global positioning data, etc. (col. 2, lines 13-37).

Regarding claim 20, **Fecher et al** disclose the workload estimation data includes at least one of radio information and phone status (col. 2, lines 10-11).

Regarding claim 21, **Fecher et al** disclose the workload estimation data includes adaptive cruise control data (col. 3, line 26).

Regarding claim 24, **Fecher et al** disclose the workload estimation data includes driver identification data (col. 2, line 54-55).

Regarding claim 25, **Fecher et al** disclose a system for sensing workload placed on a vehicle driver, comprising a network (radio-GPS, infrared system; col. 2, lines 13-

53); a microprocessor in communication with the network and including instruction (software) to implement the method of claim 1 (col. 2, lines 59-67).

Regarding claim 26, **Fecher et al** disclose a vehicle sensor in communication with the network to create the workload estimation data (col. 2, lines 13-58).

Regarding claim 28, **Fecher et al** disclose the network is a wireless network (radio-GPS, infrared system; col. 2, lines 13-38).

Regarding claim 30, **Fecher et al** discloses using software to implement the method for estimating workload placed on the driver of a vehicle, therefore the computer program product is inherent (col. 2, lines 59-67).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 11-12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fecher et al**.

Regarding claims 6 and 17, **Fecher et al** do not specify the periodic of outputting is less than one second; however, it would have been obvious to one having ordinary skill in the art at the time of the invention was made, the periodic of outputting is a designer choice based on the capacity of the system and the safety of the driver; a short

Art Unit: 2636

periodic outputting increases the safety of the driver being aware of a dangerous driving condition in a very short period of time.

Regarding claims 11 and 12, **Fecher et al** do not specify the current driving workload estimate is expressed in number ranging from one to five, or from one to one-hundred, however, it would have been obvious to one having ordinary skill in the art at the time of the invention was made, weighting or scaling the severity of a workload is preferred to be in whole digit for the convenient of the user easily perceptive of the degree of severity; a highly divided ranging (1-100) giving more precision to categorizing the type or the severity of driving information; a less divided ranging (1-5) giving less complicated alarm information and less cost; therefore the choice of ranging scale a designer choice and user preference based on the cost and the type of information and system used.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Fecher et al** in view of **Douros et al** [US. 2002/0120374]

Regarding claim 7, **Fecher et al** does not specify the combining includes a multiplicative operation; **Douros et al** teach a method and a system for estimating workload placed on a vehicle driver includes computing a weighted sum that weighting coefficient may change exponentially (multiplication is inherent) given the number of concurrent tasks ([0041]). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made the implement of a certain mathematical operation (multiplicative) to the system is based on designer choice in assigning a degree of severity to a driving condition.

6. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fecher et al** in view of **Kim** [US. 2002/0169529]

Regarding claims 14 and 15, **Fecher et al** do not disclose the device that present the driving information to the driver comprises a vehicle information management system; **Kim** teaches a vehicle information management system to collect driving information sensed, storing (log file) the information, generating alarm to the driver according to the sensed information and sending information to any concerned party at request (abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a vehicle information management system of **Kim** in **Fecher et al** system to control the process of outputting information for avoiding system output overload and for the convenient of the user accessing information at remote location.

7. Claims 22-23, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fecher et al** in view of **Gehlot** [US. 6,060,989]

Regarding claims 22 and 23, **Fecher et al** omits specifying the workload estimation data includes collision warning data and lane departure warning data, **Gehlot** teaches a method for sensing workload placed on a vehicle driver comprising warning data related to front, side and rear object detection and lane departure (Col. 4, Table 1, sensors 26-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement the teaching of **Gehlot** in **Fecher et al** system providing additional data to the estimation process to increase to accuracy of the estimation.

Regarding claim 27, **Fecher et al** disclose information can be downloaded from databases (col. 2, lines 14-58) and **Gehlot** teaches a wireless communication system for transmitting and receiving data (radio telephone; fig.2, col. 5, lines 1-43). Although internet is not disclose, it would have been obvious to one having ordinary skill in the art at the time of the invention was made telephone connection can download data from database through Internet access.

Regarding claim 29, **Gehlot** teaches when the driving workload reach to the point of safety concern, the system is set to automatically calling the police, family or friend (fig. 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made the system can be implement by designer choice and operator preference to send the driving workload to any location of choice over the communication network.

Conclusion

8. Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kaneko et al disclose a danger avoidance system for vehicle. [US. 5,521,580]

Boer discloses a method and apparatus for determining workload for vehicle. [US. 6,061,610]

Chou et al disclose a system and method for vehicle diagnostics and health monitoring. [US. 6,330,499]

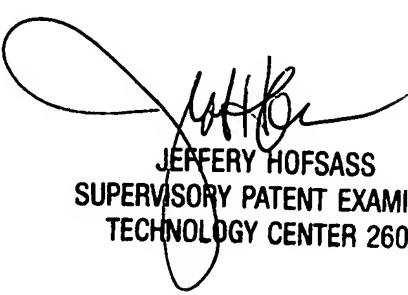
Cragun discloses a method an apparatus for displaying information in a vehicle. [US. 6,356,812]

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne V. Lai whose telephone number is 571-272-2974. The examiner can normally be reached on 8:00 am to 5:30 pm, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass Jeffery can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. V. Lai
March 3, 2005


JEFFERY HOFSSASS
SUPPLYORATIVE PATENT EXAMINER
TECHNOLOGY CENTER 2600